



1/fin

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yeo, *et al.* Docket No.: TSM03-0556
Serial No.: 10/627,218 Art Unit: 2831
Filed: July 25, 2003 Examiner: TBD
For: Capacitor With Enhanced Performance and Method of Manufacture

Certificate of Mailing via First Class Mail (37 C.F.R. § 1.8(a))

Date of Deposit: May 26, 2004

I hereby certify that the below listed correspondence is being deposited with the United States Postal Service on the date indicated above as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

Certificate of Mailing via First Class Mail (1 page)
Information Disclosure Statement (1 page)
Form PTO/SB/08A & 08B with 59 References Cited (5 pages)
Copy of 28 References Cited
Return Postcard

Respectfully submitted,

Kristy Engeldahl
Legal Assistant

Slater & Matsil, L.L.P.
17950 Preston Rd., Suite 1000
Dallas, TX 75252
Tel: 972-732-1001
Fax: 972-732-9218



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yeo, *et al.* Attorney Docket: TSM03-0556
Filed: July 25, 2003 Examiner: TBD
Serial No.: 10/627,218 Art Unit: 2831
For: Capacitor With Enhanced Performance and Method of Manufacture

Mail Stop Amendment
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450


INFORMATION DISCLOSURE STATEMENT

The Applicant wishes to bring to the attention of the Patent and Trademark Office the information noted on the enclosed form PTO/SB/08A & 08B that may be considered material to the examination of the above-identified application.

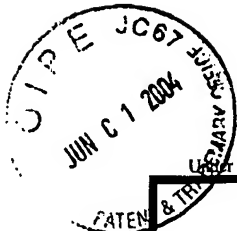
No fee is due at this time, as this Information Disclosure Statement is being filed pursuant to 37 C.F.R. § 1.97(b)(3), before the mailing of a first Office action on the merits. If any fee is required, please charge any additional amount, or credit any overpayment to Deposit Acct. No 50-1065 of the below mentioned firm.

Respectfully submitted,

May 26, 2004
Date


Steven H. Slater
Attorney for Applicant
Reg. No. 35,361

Slater & Matsil, L.L.P.
17950 Preston Rd., Suite 1000
Dallas, TX 75252
(972) 732-1001 (phone)
(972) 732-9218 (fax)



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/627,218
				Filing Date	July 25, 2003
				First Named Inventor	Yeo, et al.
				Art Unit	2831
				Examiner Name	TBD
Sheet	1	of	5	Attorney Docket Number	TSM03-0556

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
	1	US-4,314,269	02-02-1982	Fujiiki	
	2	US-4,631,803	12-30-1986	Hunter, et al.	
	3	US-4,946,799	08-07-1990	Blake, et al.	
	4	US-5,447,884	09-05-1995	Fahey, et al.	
	5	US-5,461,250	10-24-1995	Burghartz, et al.	
	6	US-5,534,713	07-09-1996	Ismail, et al.	
	7	US-5,629,544	05-13-1997	Voldman, et al.	
	8	US-5,714,777	02-03-1998	Ismail, et al.	
	9	US-5,763,315	06-09-1998	Benedict, et al.	
	10	US-5,811,857	09-22-1998	Assaderaghi, et al.	
	11	US-6,008,095	12-28-1999	Gardner, et al.	
	12	US-6,015,993	01-18-2000	Voldman, et al.	
	13	US-6,046,487	04-04-2000	Benedict, et al.	
	14	US-6,059,895	05-09-2000	Chu, et al.	
	15	US-6,222,234 B1	04-24-2001	Imai	
	16	US-6,232,163 B1	05-15-2001	Voldman, et al.	
	17	US-6,291,321 B1	09-18-2001	Fitzgerald	
	18	US-6,294,834 B1	09-25-2001	Yeh, et al.	
	19	US-6,387,739 B1	05-14-2002	Smith, III	
	20	US-2002/0076899 A1	06-20-2002	Skotnicki, et al.	
	21	US-6,413,802 B1	07-02-2002	Hu, et al.	
	22	US-6,414,355 B1	07-02-2002	An, et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/627,218
				Filing Date	July 25, 2003
				First Named Inventor	Yeo, <i>et al.</i>
				Art Unit	2831
				Examiner Name	TBD
Sheet	2	of	5	Attorney Docket Number	TSM03-0556

[illegible]

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.
SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	10/627,218
				Filing Date	July 25, 2003
				First Named Inventor	Yeo, <i>et al.</i>
				Group Art Unit	2831
				Examiner Name	TBD
Sheet	3	of	5	Attorney Docket Number	TSM03-0556

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cita. No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	32	ISMAIL, K, <i>et al.</i> , "Electron Transport Properties of Si/SiGe Heterostructures: Measurements and Device Implications," Applied Physics Letters, Vol. 63, No. 5, (August 2, 1993), pp. 660-662.	
	33	NAYAK, D.K., <i>et al.</i> , "Enhancement-Mode Quantum-Well Ge _x Si _{1-x} PMOS," IEEE Electron Device Letters, Vol. 12, No. 4, (April 1991), pp. 154-156.	
	34	GAMIZ, F., <i>et al.</i> , "Strained-Si/SiGe-on-Insulator Inversion Layers: The Role of Strained-Si Layer Thickness on Electron Mobility," Applied Physics Letters, Vol. 80, No. 22, (June 3, 2002), pp. 4160-4162.	
	35	GAMIZ, F., <i>et al.</i> , "Electron Transport in Strained Si Inversion Layers Grown on SiGe-on-Insulator Substrates," Journal of Applied Physics, Vol. 92, No. 1, (July 1, 2002), pp. 288-295.	
	36	MIZUNO, T., <i>et al.</i> , "Novel SOI p-Channel MOSFETs With Higher Strain in Si Channel Using Double SiGe Heterostructures," IEEE Transactions on Electron Devices, Vol. 49, No. 1, (January 2002), pp.7-14.	
	37	TEZUKA, T., <i>et al.</i> , "High-Performance Strained Si-on-Insulator MOSFETs by Novel Fabrication Processes Utilizing Ge-Condensation Technique," Symposium On VLSI Technology Digest of Technical Papers, (2002), pp. 96-97.	
	38	JURCZAK, M., <i>et al.</i> , "Silicon-on-Nothing (SON) -- an Innovative Process for Advanced CMOS," IEEE Transactions on Electron Devices, Vol. 47, No. 11, (November 2000), pp. 2179-2187.	
	39	JURCZAK, M., <i>et al.</i> , "SON (Silicon on Nothing) -- A NEW DEVICE ARCHITECTURE FOR THE ULSI ERA," Symposium on VLSI Technology Digest of Technical Papers, (1999), pp. 29-30.	
	40	MAITI, C.K., <i>et al.</i> , "Film Growth and Material Parameters," Application of Silicon-Germanium Heterostructure, Institute of Physics Publishing, Ch. 2 (2001) pp. 32-42.	
	41	TIWARI, S., <i>et al.</i> , "Hole Mobility Improvement in Silicon-on-Insulator and Bulk Silicon Transistors Using Local Strain," International Electron Device Meeting, (1997), pp.939-941.	
	42	OOTSUKA, F., <i>et al.</i> , "A Highly Dense, High-Performance 130nm Node CMOS Technology for Large Scale System-on-a-Chip Applications," International Electron Device Meeting, (2000), pp. 575-578.	
	43	MATTHEWS, J.W., <i>et al.</i> , "Defects in Epitaxial Multilayers -- I. Misfit Dislocations," Journal of Crystal Growth, Vol. 27, (1974), pp. 118-125.	
	44	MATTHEWS, J.W., <i>et al.</i> , "Defects in Epitaxial Multilayers -- II. Dislocation Pile-Ups, Threading Dislocations, Slip Lines and Cracks," Journal of Crystal Growth, Vol. 29, (1975), pp. 273-280.	
Examiner Signature			Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231 *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/627,218
				Filing Date	July 25, 2003
				First Named Inventor	Yeo, <i>et al.</i>
				Group Art Unit	2831
				Examiner Name	TBD
				Attorney Docket Number	TSM03-0556
Sheet	4	of	5		

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	45	MATTHEWS, J.W., <i>et al.</i> , "Defects in Epitaxial Multilayers - III. Preparation of Almost Perfect Multilayers," Journal of Crystal Growth, Vol. 32, (1976), pp. 265-273.	
	46	SCHÜPPEN, A., <i>et al.</i> , "Mesa and Planar SiGe-HBTs on MBE-Wafers," Journal of Materials Science: Materials in Electronics, Vol. 6, (1995), pp. 298-305.	
	47	MATTHEWS, J.W., "Defects Associated with the Accommodation of Misfit Between Crystals," J. Vac. Sci. Technol., Vol. 12, No. 1 (Jan./Feb. 1975), pp. 126-133.	
	48	HUANG, X., <i>et al.</i> , "Sub-50 nm P-Channel FinFET," IEEE Transactions on Electron Devices, Vol. 48, No. 5, May 2001, pp. 880-886.	
	49	SHAHIDI, G.G., "SOI Technology for the GHz Era," IBM J. Res. & Dev., Vol. 46, No. 2/3, March/May 2002, pp. 121-131.	
	50	SHIMIZU, A., <i>et al.</i> , "Local Mechanical Stress Control (LMC): A New Technique for CMOS-Performance Enhancement," IEDM 2001, pp. 433-436.	
	51	WONG, H.-S.P., "Beyond the Conventional Transistor," IBM J. Res. & Dev., Vol. 46, No. 2/3, March/May 2002, pp. 133-167.	
	52	YANG, F.L., <i>et al.</i> , "25 nm CMOS Omega FETs," IEDM 2002, pp. 255-258.	
	53	YANG, F.L., <i>et al.</i> , "35nm CMOS FinFETs," 2002 Symposium on VLSI Technology Digest of Technical Papers, 2002, pp. 104-105.	
	54	THOMPSON, S., <i>et al.</i> , "A 90 nm Logic Technology Featuring 50nm Strained Silicon Channel Transistors, 7 Layers of Cu Interconnects, Low k ILD, and 1 um ² SRAM Cell," IEDM, pp. 61-64.	
	55	WELSER, J., <i>et al.</i> , "NMOS and PMOS Transistors Fabricated in Strained Silicon/Relaxed Silicon-Germanium Structures," IEDM 1992, pp. 1000-1002.	
	56	BLAAUW, D., <i>et al.</i> , "Gate Oxide and Subthreshold Leakage Characterization, Analysis and Optimization," date unknown.	
	57	"Future Gate Stack," International Sematech, 2001 Annual Report.	
Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231 *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/627,218
				Filing Date	July 25, 2003
				First Named Inventor	Yeo, <i>et al.</i>
				Group Art Unit	2831
				Examiner Name	TBD
				Attorney Docket Number	TSM03-0556
Sheet	5	of	5		

[illegible]

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

Applicant's unique citation designation number (optional). *Applicant is to place a check mark here if English language Translation is attached. Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). *Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.